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(54) ~~Title:~~ INTERNAL COMBUSTION ENGINE COMPRISING A SMALL-VOLUME CATALYTIC CONVERTER(54) ~~Bezeichnung:~~ BRENNKRAFTMASCHINE MIT EINEM KLEINVOLUMIGEN KATALYSATOR(57) ~~Abstract~~

The invention relates to an internal combustion engine comprising a volumetric displacement (H) and a catalytic converter (2) which is connected downstream and which is provided for cleaning exhaust gases. The catalytic converter (2) has a geometric surface (O). In addition, the catalytic converter (2) has an effectiveness (E) for converting at least one noxious component contained in the exhaust gas into innocuous constituents, and has at least one honeycomb body (3), whereby all honeycomb bodies (3), together, have a total volume (V). According to the invention, the volume (V) is selected such that it is smaller than the volumetric displacement (H) by at least a factor of approximately 0.6, and the geometric surface (O) is dimensioned, however, such that the catalytic converter (2) has an effectiveness (E) of greater than 98 %. The honeycomb body (3) is preferably a metallic honeycomb body (3) consisting of coated and/or wound, at least partially structured sheet metal layers (6, 7) whose channels (4) are separated from one another by channel walls (5), and whose average thickness (d) is no greater than 40 micrometers, preferably no greater than 35 micrometers, especially ranging from 18 and 32 micrometers, whereby the number (A) of channels (4) of the honeycomb body (3) over a cross-section through the honeycomb body (3) equals at least 600 cpsi. This makes it possible to provide small-volume particularly economical honeycomb bodies.

